Where's the Nutrition?

Beginning Series, Part 3

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here do you get your protein?—Your fat?—Your calcium?—The nutrition of

If I've been asked once I've been asked a hundred times, "Where do you get protein?" or, Where do you get calcium?" To be fair, the questions arise less these days as less people rely on animal foods for protein or calcium. Nevertheless the question remains, "Does a macrobiotic diet supply adequate nutrition?"

Without going into the fear behind the query or the anxiety about relinquishing the relished hot dogs and favored ice cream, I reply, "Well, macrobiotics includes good food as all diets do and avoids junk foods as all diets should."

"Good food" is based on the building blocks of sound nutrition—carbohydrates, proteins, fats, vitamins, and minerals. Here is a summary of macrobiotic foods that supply these nutrients.

CARBOHYDRATES

Whole cereal grains provide complex carbohydrates and are the primary source of carbohydrates for people eating a macrobiotic diet. Whole grains such as brown rice, whole wheat, buckwheat, millet, tef, quinoa, barley, and corn provide a matrix of nutrition that includes protein, fat, fiber, vitamins, and minerals in addition to abundant carbohydrates. Carbohydrates provide glucose and are the main source of energy for the body.

In grains, carbohydrates are present in long chains of glucose molecules and as such provide a long-term energy and a stabilizing effect on blood sugar.

Other sources of carbohydrates include beans, nuts, seeds, fruits, and vegetables as all plant foods contain some carbohydrates, whether in simple or complex form. Grains and beans are usually consumed in whole form, rather than refined. Pastas, breads, and bean products such as tofu offer variety.

Whole foods, such as those emphasized in macrobiotics, provide an adequate quantity of fiber—a specialized carbohydrate that is indigestible. Fiber enhances health by providing bulk, the mass of which passes through the body and helps eliminate toxins. Most counselors and books recommend whole grains, pastas, and/or breads at each meal.

PROTEINS

Whole dried beans are the primary source of protein for people eating a macrobiotic diet. Beans such as pinto, black, split pea, white, azuki, chickpea, lentils and others contain carbohydrates, fiber, vitamins, and minerals alongside the protein. The combination of beans and grains (such as brown rice and lentils or corn tortillas and pinto beans) provide most, if not all, of the essential amino acids—the building blocks of protein. The body uses protein for growth and repair of tissue.

There are varying opinions on how much protein is required for optimal health, what kinds of protein are best, and whether or not it is necessary to combine grains and beans to provide adequate protein. Advice ranges from low-protein consumption for people healing from disease to recommendations for high-protein use for growing children and pregnant women. "Low-protein consumption" means eating beans once or twice a week, if at all, and avoiding all animal protein. "High-protein consumption" means eating grains and beans every day at least once and twice if needed, plus animal protein if desired.

Vegetarians choose plant sources and obtain protein from beans, nuts, seeds, and foods containing naturally processed soybean products such as miso. Macrobiotic people who eat animal foods consume fish, eggs, chicken, or other animal foods, depending on individual purpose and need.

FATS

The discussion of fats consumed by people choosing a macrobiotic diet is more complicated than the discussions of carbohydrates and proteins. This is due to many reasons but one is the fact that macrobiotics as a discipline has evolved. In the 1960s, many people interested in macrobiotics were young and healthy and studied macrobiotics as much for its philosophy as for its diet. In the seventies and eighties more people were coming to macrobiotics due to illness and the

desire to heal from disease. Nowadays, the emphasis remains on diet with whole grains, beans, and fresh organic vegetables as the main components. However, advice about fats has changed.

When I began macrobiotics in 1979, the books listed sesame oil, safflower oil, canola oil, and corn oil. I went to the health food store and bought whatever brand of oil was available, thinking that every product was wholesome and good for me. I don't do this anymore. Neither do many other macrobiotic practitioners. However, there is no complete consensus on which fats to consume and which to avoid. Some books published after 2000 still encourage baking with liquid oils!

People throughout time have eaten fats, primarily fats from animal foods such as meat, milk, and other dairy products. The main plant fats utilized were olive oil, coconut oil, palm oil, sesame oil, and flax oil; as olives, coconuts, palm fruit, sesame seeds, and flax seeds render oil through simple pressing. During World War II, fats changed greatly—at least in the United States. Butter was rationed and margarine was marketed as a "healthy" substitute for consumption and supportive of the war effort. Other processed foods such as refined grains, enriched flour, and liquid oils became prolific. Pesticides were used liberally to grow and store foods.

As years progressed, awareness grew about food, the food industry, and health. Some writers noted that pesticides harm the environment. Researchers began to follow health trends and to correlate certain diseases with dietary habits. There was also some misinformation as products were developed in response to demand; some such as liquid oils were supported by research that stated health benefits and were backed by the government.

Today, there is progress and there is misinformation. The connection between health and diet is established. Doctors recommend that patients

with heart disease eat less saturated animal fats. Awareness has grown to demand quality foods and especially quality fats, yet big business doesn't always provide it.

It is not enough to buy a bottle of oil off the shelf to supply fat. To help make an informed decision, it is important to understand what fats are, how they respond in the body, and what the quality sources are, including knowledge about the various products and production methods.

Fats are made of chains of fatty acids, and these are classified into subgroups of saturated fatty acids, monounsaturated fatty acids, and polyunsaturated fatty acids. Foods classified as fat sources such as animal fats, milk, butter, eggs, nuts, seeds, oils, and avocados contain all three types of fatty acids. There is usually an abundance of one type. For instance, butter is classified as a saturated fat as it contains an abundance of saturated fatty acids. Olive oil contains an abundance of monounsaturated fatty acids—sesame oil polyunsaturated fatty acids. Saturated fats are solid at room temperature; monounsaturated fats are liquid at room temperature and solid when chilled; polyunsaturated fats are liquid at room temperature and when chilled. In addition, there are Omega 3's, Omega 6's, and both bad and good cholesterol.

The body uses fats for brain development, hormones, warmth, and energy, storing fat in tissues around the body for times of need and to help cushion internal organs. The details of how fats do this are fascinating as many of the recommended sources provided below elaborate. The important thing is that quality matters. If poor-quality fats are consumed, the body carries it around a long time.

There is a lot of misinformation on fats. Everyone pretty much agrees on using nuts, seeds, and olive oil. Nevertheless, there is disagreement about using coconut oil, flax oil, fish oil supplements, animal fats, and the many kinds of liquid oils, as well as The affordable, one stop internet shop for the highest quality macrobiotic foods, innovative cookware, books and more.

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how much to use.

Products vary greatly, especially among liquid oils. Companies bottle oils with labels that don't fully disclose processing techniques. It is not as simple as crushing nuts or seeds and letting oil seep out. Most seeds and nuts require a lot of pressure, and pressure generates heat. When heat becomes high enough, the oil begins to degrade, causing free radicals that harm the body. Some companies use hexane—a form of petroleum—to separate oil from crushed seeds. After pressing, oil can be subjected to a host of other processes such as bleaching, refining, and deodorizing. All of these things cause a host of problems. What is a consumer to do?

Here is what I have gleaned from current sources and what I currently practice.

- 1. Use a variety of fat sources from nuts, seeds, sesame oil, olive oil, and avocados to get all types of fatty acids, Omega 3's, and Omega 6's. Walnuts and flax oil are sources of Omega 3's. Some people supplement with fish oil.
- 2. Use a proportion of fat suitable for your needs. If your health demands it, use less fat, such as relying on nuts and seeds and avoiding all liquid oils and animal fats. A low-fat diet has been shown to reverse some diseases; if this is your situation, obtain counsel. If you are healthy and/or feeding young children, be aware a low-fat diet can be inadequate—some

nutritionists caution against it. Use nuts, seeds, nut butters, unheated liquid oils, butter if desired, and other quality products on a regular basis, and in appropriate quantities.

- 3. Seek quality always. Avoid the worst culprits—commercial and refined products. Buy organic. Personally, I use unrefined sesame oil and extra-virgin olive oil for sautéing and unrefined extra-virgin coconut oil for baking and frying. Occasionally, my family has butter, fish, or poultry.
- 4. Use liquid oil wisely. Don't overheat liquid oils when sautéing on top of stove and never put into the oven. Coconut oil and butter produce better baked goods than using liquid oils, which often degrade in the oven.
- 5. Animal fats are not necessarily taboo. Just as artificial sweeteners have been determined to be worse than white sugar, so it seems, artificial fats are worse than butter—my children spread less organic butter on bread than so-called "healthy" margarine from the health food store.
- 6. Pay attention to cravings. If you crave peanut butter, cookies, chips, ice cream, crackers, or other foods high in fat, you probably need more quality fat in your diet.
- 7. For more details on fats and nutrition in general, read the macrobiotic books listed below and works by these doctors and nutritionists: Neal Barnard, M.D.; Mary Enig, Ph.D.; Sally Fallon; John McDougall, M.D.; and Andrew Weil, M.D. Each of these authors also maintains an active website.

VITAMINS AND MINERALS

Vitamins come from all foods: grains, beans, nuts, seeds, vegetables, and fruit. Minerals are abundant in a macrobiotic diet. Whole grains and beans have magnesium, potassium, iron, and many others. Vegetables and fruits provide many minerals, ranging from the calcium in dark leafy greens to potassium in fruits. Here is a sample list of sources:

B vitamins: whole grains, beans,

and nuts.

Vitamin C: citrus fruits, berries, parsley, and other fruits and vegetables.

Vitamin E: nuts and seeds, dark green leaves of broccoli, and other sources.

Vitamin A: deep orange or green vegetables.

Vitamin D: exposure to sunlight.

Vitamin B₁₂: Small amounts in fermented products such as miso, tempeh, and pickles. Larger amounts are available in animal foods and dairy products. Vegetarians may need to supplement to avoid deficiency.

Calcium: Seaweed, deep leafy greens, and sesame seeds.

Iron: Whole grains, beans, nuts, seeds, and seaweed.

Magnesium: Whole grains, beans, seeds, seaweed, and leafy greens.

Iodine and trace minerals: Sea salt and seaweed.

BOOK RESOURCES

The proportion of nutrients is vital to a well-balanced diet. While everyone agrees on the necessity of including quality food and avoiding junk food, there is quite a range on how much carbohydrate, protein, and fat to eat. Most cookbooks cover simple guidelines and are a good place to start. To go further, consult any or all of the following titles. Some of these books contain recipes.

Herman Aihara wrote several books and many articles during his lifetime. *Acid and Alkaline* and *Basic Macrobiotics* contain a pleasant blend of Western and Eastern thought. *Acid and Alkaline* incorporates the acidity and alkalinity of foods with yin and yang, using charts and diagrams to illustrate and categorize different foods. *Basic Macrobiotics* discusses nutrition in depth from a macrobiotic perspective.

Annemarie Colbin is a certified health education specialist, the founder of New York's Natural Gourmet Cooking School and Institute for Food and Health, and author of *The*

Book of Whole Meals and The Natural Gourmet (both out-of-print) and Food and Healing. Food and Healing is a comprehensive book on diet, nutrition, and health. Annemarie discusses food in a unique way—she presents diets as holistic systems rather than merely components. I highly respect Annemarie Colbin's expertise and treasure her books in my collection.

Rebecca Wood is a consultant to the natural-foods industry and an expert on everything from amaranth to zucchini. Her book The Splendid Grain won a James Beard Award and a Julia Child/IACP Award and contains chapters divided by continent, containing information and recipes of their respective natural grains. Rebecca is thorough in her research and presents stories about the grains, where and how they grow, and original recipes. The New Whole Foods *Encyclopedia* lists food alphabetically from A to Z. With each entry, Rebecca describes the food, lists its nutritive profile, and suggests preparation methods. I consider this book to be the definitive guide on whole foods and reach for it every time I have a question about any particular food.

In his book, *Nature's Cancer-Fighting Foods* Verne Varona discusses diet, nutrition, disease, current theories, and much more with his characteristic humor enlivening every page. Verne has counseled many thousands of people and explains the hows and whys of food and health in an easy-to-understand way. There are about 40 pages of recipes.

Michio Kushi's books are valuable resources on diet, health, and nutrition. Many of his books also discuss disease reversal and will be featured in the next installment of this series.

Julia Ferré is author of Basic Macrobiotic Cooking: 20th Anniversary Edition and plans the menus at the French Meadows camp. Her new book, French Meadows Cookbook, is available from gomf@earthlink.net.